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DEP Moves on PCB's

DEP has stepped up its efforts to reduce levels of PCB's in the heavily fished Housatonic River following the discovery of high levels in game fish in the northern stretch of the river this spring.

The levels prompted State Health Commissioner Douglas S. Lloyd to warn consumers not to eat fish taken in the Housatonic from Lake Lillinonah north to the Massachusetts border. In that stretch of the river Health Department laboratory analyses of fish samples taken by DEP showed levels of PCB in the fish exceeded the federal Food and Drug Administration standard of 5 parts per million (ppm).

On August 9 Commissioner Stanley J. Pac traveled to the General Electric plant at Pittsfield, Massachusetts, the probable major source of PCB's in the river basin, to meet with G. E. officials. His goal was to find out firsthand what steps the company is taking to eliminate its discharge to the river.

"The problem G. E. now faces," the Commissioner said, "is to eliminate the indirect discharge of PCB's caused by the presence of the chemical in the walls, floors and pipes of the factory and the earth below the plant. The company ceased use of the chemical five months ago and no longer discharges any PCB's directly into its wastewater."

The residual leaching of the chemical in June and July was measured by G. E. to be approximately one and a half ounces per day, Pac said.



The Commissioner said G. E. officials told him that the company has undertaken a \$25 million clean-up effort in and around the plant to totally eliminate the PCB discharge.

Even after the last seepage of PCB from the factory has been eliminated, two problems will remain -- how to eliminate seepage from other sources, such as old refuse disposal areas, and how to prevent PCB's now trapped in river sediments from moving into the food chains that lead to fish and ultimately to man.

One of the difficulties facing DEP in its efforts to rid the river of PCB's is that the chemical has been used so widely for so long. PCB's have been used since 1929 in heat transfer systems, hydraulic systems, gas turbines, vacuum pumps, fire retardants, textiles, sealants, and printing ink.

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Reader's Forum

To the Editor:

The letter from W. J. Huebner (Connecticut Construction Industries Association) in your July/August issue, commenting on Transportation Alternatives by Tom Strumolo of the Department of Planning and Energy in your June issue, is evidence in writing of Mr. Strumolo's contention that educating the public to the fact that we face a real energy crisis is a pressing need.

Mr. Huebner fears a crisis, but one developing from Big Brother's impinging on the freewheeling decisions of 140 million U.S. motorists. Apparently, according to Mr. Huebner, if we continue careening along in our cars as we have been, we can simply out-distance or by-pass Big Brother. I don't believe this.

We are indeed in an energy-environmental crisis and this is chiefly the result of cheap, private transportation--the car. However, a car without an operator is no more a threat to our lifestyle than a rock. The car has not diminished our quality of life--we have, by misusing it.

We need cars today as we need heat from fire to make our New England homes livable in Winter. But fire out of control can destroy our homes, too. We need pure water, yet a torrent roaring through a floodplain development can kill.

With every breath we need fresh air, yet with our skies laden with ozone, carbon monoxide and other poisons (mostly, emissions from guess where?) death comes sooner to those suffering from respiratory diseases. And thirty years ago, what did Detroit and the oil companies do about those early smog warnings?

A car can help save a life, often some of those gravely hurt in our annual toll of 250,000 highway injuries.

What saddens me about Mr. Huebner's letter is that he admits to no need to alter our present course into the future, where every driver does his or her own thing. Yet it is this 'freedom of choice' without considering the alternatives that is moving us along a super highway to where none of us wants to go--to the very front door of Big Brother.

Robert B. Ruthman
Supervisor
Fairfield County Conservation
District



Announcement

The current Department of Environmental Protection/Cooperative Extension Service workshop program, "An Education Program for Community Officials in Local Control of Land Use in Connecticut" (see July/August issue of Citizens' Bulletin), will be offered this fall in the Hartford/Litchfield county area. See the October issue of the Citizens' Bulletin for details.

The DEP will also cooperate with the Connecticut Audubon Society in conducting inland wetland workshops for inland wetland agencies, developers and other interested local officials. These special purpose workshops will assist participants in the evaluation of impacts from wetland development. The program will include an all-day, Saturday field trip. The workshops will be offered in 5 locations throughout the state beginning in October 1977 and finishing in June 1978. The first workshop will be offered in Fairfield County in October, the second in Litchfield County in November. See the October Citizens' Bulletin for details.

Corrections

In last month's issue we mistakenly identified one of the participants in the photograph of the Sleeping Giant dedication as Maurice "Red" Arnold of the Bureau of Outdoor Recreation. The individual in the photograph was in fact Mr. Russell Williams, Vice President of the Sleeping Giant Park Association.

We also stated in the text explaining our Index update that it contained references to all major articles since the inception of the Bulletin. That is not true. The Index in the July-August issue contained references only to major articles published in issues since the last Index was published in the January, 1975 issue. The January, 1975 issue contained an index of the major articles from the first issue of the Citizens' Bulletin in October, 1973 to the December, 1974 issue.

DEP CITIZENS' BULLETIN

Published eleven times a year by the Department of Environmental Protection. Yearly subscription \$2.00. 2nd class postage paid at Hartford, Connecticut. The Citizens' Bulletin is supported in part by funds provided by the U.S. Department of the Interior, as authorized under the Water Resources Research Act of 1964, PL 88-379. Funds are also provided through a federal grant from the Office of Coastal Zone Management under the Coastal Zone Management Act of 1972. Please forward any address change immediately.

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Hearing on Water Quality Planning

Connecticut's Continuing Planning Process for the control of water pollution will be the topic of a public hearing to be held by the Water Compliance Unit of DEP on October 11th at 7:30 p.m. at the DeKoven House Community Center, 27 Washington Street in Middletown.

The document, an annual requirement of the Federal Water Pollution Control Act, defines the responsibility for the preparation of state water quality management plans, the state water quality strategy, water quality standards and the annual water quality inventory report.

The Continuing Planning Process document provides the public with an excellent source of information on the program goals

and output commitments of Connecticut's water pollution control activities.

The purpose of the hearing is to provide the public an opportunity to comment on the plan which summarizes the planning responsibilities for the state water pollution control program.

Copies of the Continuing Planning Process are available for inspection at the DEP, Water Compliance office at 122 Washington Avenue, Hartford and at the local Regional Planning Agency offices. Limited copies are available from the DEP.

Written comments may be presented at the hearing or submitted in advance to the DEP, Water Compliance Unit, State Office Building, Hartford, Ct. 06115 -- Attention Fred Banach, Senior Sanitary Engineer.

Waterfowl Season Summary

The dates, times and limits for the waterfowl hunting season have been adopted by DEP following a public hearing on August 26. The table below gives the seasons and bag limits for various waterfowl species. Please note that the open seasons vary from species to species.

For complete information on the waterfowl season, including the new non-toxic shot zone, consult the Waterfowl Hunting Guide, available from DEP, Information and Education Unit, State Office Building, Room 112, Hartford, Connecticut 06115.

SPECIES	COASTAL WATERS ONLY (Coastal waters including rivers and streams seaward from first upstream bridge)	STATEWIDE (Including Coastal Waters)	BAG LIMITS
Ducks, Coots, Mergansers	Noon, Oct. 12 to Sunset, Oct. 14	7 a.m., Oct. 15 to Sunset, Oct. 29; --- Noon, Nov. 23 to Sunset, Dec. 24	4 daily, 8 in possession <u>Except:</u> Mergansers: 5 daily 10 in possession Black and Wood Ducks: 2 daily 4 in possession Redheads and Canvasbacks: *1 daily *1 in possession
Canada Goose	Noon, Oct. 12 to Sunset, Oct. 14	7 a.m., Oct. 15 to Sunset, Oct. 29; --- 1/2 hour before Sunrise, Nov. 17 to Sunset, Jan. 7	3 daily, 6 in possession
Blue-Winged Teal <u>Bonus</u>	Noon, Oct. 12 to Sunset, Oct. 14	7 a.m., Oct. 15 to Sunset, Oct. 20	**2 extra daily **4 extra in possession
Scaup <u>Bonus</u>	1/2 hour before Sunrise, Jan. 13 to Sunset, Jan. 28		5 daily, 10 in possession

Except as indicated on the above chart, the hours for hunting are one-half hour before Sunrise until Sunset.

*This means you may have 1 bird only, not 1 of each.

**This means you may have 2 extra Blue-Wing Teal per day and 4 extra Blue-Wing Teal in possession over and above the regular bag limit of 4 and possession limit of 8 for ducks.

Hunter Safety & Conservation Education: A Necessity

By Frank Glista, DEP Boating & Hunting Safety Representative

On September 17th a large group of men and women assembled to hear experts talk on Waterfowl Identification, Taxidermy, Black Powder Shooting, Bow Hunting and other topics.

If it sounds like a sportsmen's club outing, you guessed wrong. Actually this group included most of Connecticut's certified Hunter Safety Instructors, gathered for their annual workshop. This year's volunteers, numbering 365, and their predecessors, have instructed and introduced over 60,000 youths and adults to the sport of hunting over the past 22 years.

Teaching hunting safety, hunting skills and proper outdoor behavior is not new -- it's a responsibility that mature men have always accepted. The tribes of Africa, the American Indians and Eskimos included hunter training as a part of the preparation for manhood. To these people, education in the methods and traditions of hunting was a necessity, and a youth was not regarded as a member of his society until he was judged a competent hunter.

Along the American frontier, the teaching of outdoor skills and marksmanship was a family affair, and accomplishment in the rural arts was not only a source of family support, but of pride. This type of family training is, in large measure, no longer available in our urban society.

Formal hunter safety training received its start in New York in 1949. Shortly after that, in 1955, the Connecticut General Assembly recognized the increased interest in sport hunting and outdoor recreation and enacted laws intended to provide the public with instruction in the safe handling of firearms, information concerning the responsibilities of the sportsmen for the game they pursue, and instruction in the basics of game management. Another important goal of the legislation was to foster better relations among sportsmen, Conservation Officers, landowners and the State agencies involved with this sport.

To achieve the goals set forth in the Statutes, the law requires that all first-time hunters, all other persons who have not held a license in any state or country within 10 years, and all youths between the ages of 12 and 16 who wish to accompany a licensed hunter must enroll in a course of instruction and obtain a certificate of competence before being allowed to purchase a license or accompany a licensed hunter. Householders who might come in contact with firearms are also urged to take the course even if they do not plan to hunt. The cer-

tificate is signed by the instructor and attests to the satisfactory completion of a hunter safety education course.

Course content and materials for the Hunter Safety and Conservation Education Program were developed by experts from the National Rifle Association and approved for use by DEP. A staff of volunteers provides the instruction. These volunteers must pass an examination and background investigation administered by DEP before they can become instructors.

Courses are offered throughout the year with a majority of the courses offered between September and December. The recommended six-hour course covers all the subjects deemed necessary to educate a novice and includes hunting traditions and ethics, hunting and conservation, hunter responsibilities, firearms and ammunition, fundamentals of shooting and safe gun handling.

If range facilities are available, actual firing is encouraged. However, it is not mandatory. The lack of state ranges makes this an important segment of hunter training unavailable to many students.

Because of budget limitations, the Department's role in this program is limited to qualifying volunteer instructors, coordinating their activities, supplying course materials, and providing liability, property damage and other forms of insurance. The insurance is required since most courses are held in private homes, sportsmen's clubs, veterans' halls, police departments, schoolrooms and town facilities, and their use would be denied without such protection.

The Department's goal is to educate the novice hunter to understand and appreciate a great American tradition, to participate in a lifetime sport, and to assist in wildlife management programs. Hunters and sportsmen alone have contributed a massive 2.6 billion dollars for conservation and wildlife restoration programs in the U.S. since 1920. Their current rate of contribution exceeds \$202 million annually. No other segment of society has contributed more to the benefit of all wildlife.

For more information regarding hunter safety programs, contact Frank Glista, DEP, Information and Education Unit, State Office Building, Hartford, Conn. 06115, Tel. 566-3489.

For the names of hunter safety instructors in your town, contact your Town Clerk.

September 24th

National Hunting & Fishing Day

Saturday, September 24, 1977, will mark the sixth annual observance of National Hunting and Fishing Day. To celebrate the occasion, the Connecticut DEP will co-sponsor programs in Wolcott and South Woodstock highlighting the theme, "The Sportsman and Conservation."

The Bristol Fish and Game Association will host a day-long open house at its grounds on Willis Street in Wolcott. The Putnam Fish and Game Club is planning a two-day program for both Saturday and Sunday at its facilities on Stone Bridge Road in South Woodstock.

For the past three years, DEP has held a major open house at its wildlife management facility in Franklin, Connecticut. In an effort to provide easier public access and limit travel requirements, it was decided to discontinue the Franklin program

and request the cooperation of the Bristol and Putnam clubs in arranging for locations convenient to a broader segment of Connecticut's population.

Among the activities planned at both sites are field dog demonstrations, archery, trap and skeet shooting, muzzleloader shooting and fly casting demonstrations. Displays of boats and various sporting equipment, wildlife and fishery management techniques, fly tying and shot shell reloading as well as related films and slide presentations will also be featured.

The goal of this year's National Hunting and Fishing Day is to make as many people as possible aware of the many ways in which sportsmen have supported and continue to support conservation efforts, both through individual efforts and through the financing provided by license fees and special taxes on sporting equipment.



Environmental Town Meeting Series

Conservation Commission members, other interested citizens from around the State, and DEP staff will be participating in a series of environmentally oriented "town meetings" September 21, 28 and October 5.

The series, which will originate at the Merlin D. Bishop Center in Storrs, will be transmitted by closed circuit television to reception facilities at six UConn Campus sites in Groton, Stamford, Storrs, Torrington, Waterbury and West Hartford between 7:15 p.m. and 9:30 p.m. on the three consecutive Wednesday evenings.

A special feature of the closed circuit broadcasts will be that participants at all of the centers will be able to address the speakers in Storrs and receive an immediate reply through a two-way audio hook-up at each facility. The audio aspect of the workshops should provide a forum that allows for maximum dialogue and exchange of ideas.

The series is organized into three two-hour sessions that will concentrate on a variety of issues related to DEP policies and enforcement procedures, open space planning, land use decision making and wetlands protection. Participants will include members of local Conservation Commissions, DEP Commissioner Stanley J. Pac, DEP Staff, representatives from the Army Corps of Engineers, the University of Connecticut School of Law and the University of Connecticut Cooperative Extension Service.

Although the conference has been specifically developed for Conservation Commission members, participation in the "town meetings" is open to all interested citizens. Brochures describing the program may be obtained from the Information and Education Unit of the Department of Environmental Protection, 165 Capitol Avenue, Hartford, Connecticut 06115.

PCB's (Cont. from pg. 1)

According to Commissioner Pac, the Water Compliance Unit is reviewing its records of chemical spills to determine whether any known PCB-related spills can be identified.

Pac also said that since discarded transformers, pumps, and other PCB-containing products could be a source of PCB's leaching into the river systems, the Solid Waste Management Unit will assist Water Compliance in investigating potential PCB pollution from refuse disposal areas in the watershed.

"The objective of DEP's efforts in this area is to approach, as nearly as possible, a zero discharge of PCB's into the environment," Pac said.

"Meanwhile, the Department is developing the information base necessary to fashion a strategy for dealing with the PCB's already deposited in the river's bottom sediments," he said.

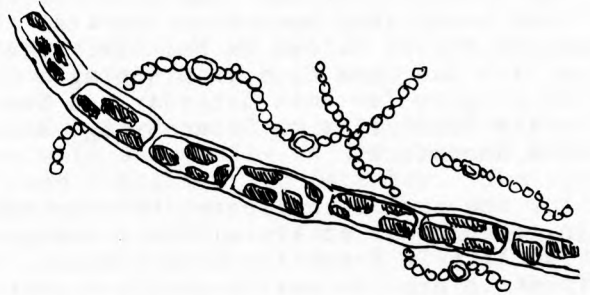
On August 18, Deputy Commissioner Melvin J. Schneidermeyer met in Albany with members of the Housatonic Valley Association (HVA) and officials of the New York Department of Environmental Conservation (DEC) to discuss what steps Connecticut might consider taking based on New York's experience.

The DEC is currently carrying out extensive studies on the Hudson River to clean up PCB contamination from the G. E. plant in Glens Falls. The New York research is being funded by a \$6 million settlement with the company following lengthy administrative proceedings.

According to Deputy Commissioner Schneidermeyer, "the many consultant studies currently underway in New York will provide a wealth of information potentially useful not only to New York but also to Connecticut as our states consider important policy questions regarding this pollutant. This information should be available within the next three to six months. We have developed a direct line of communication with the research managers at DEC so that we can obtain copies of the various reports just as soon as they are available."

The term PCB's refers to a class of compounds that resemble DDT in structure and are extremely persistent in the environment. Though less toxic than DDT, PCB's are more resistant to breakdown and can only be destroyed by extremely high temperature incineration -- for example, 2700 degrees fahrenheit for a period of one and one-half seconds or more. PCB's have been shown to cause skin lesions, reproductive failures and liver cancer in laboratory animals.

Researchers believe that like DDT, PCB's may concentrate in fatty tissue as they move through food chains: from river sediments to organisms that live and feed on the bottom, to fish that eat the organisms, to birds and mammals that eat the fish. This concentration phenomenon occurs because an individual animal at one level in the food chain eats many animals from the level below it. Studies in New York State are investigating the possibility that fish can "up-take" PCB's directly from the water through their gills.



General public awareness of PCB's was sparked in the summer of 1975 when it was disclosed that the General Electric Company at Glens Falls, New York, was discharging 30 pounds per day of the substance to the Hudson River, and that fish taken downstream of the plant contained PCB levels greatly exceeding the amount set by the U. S. Food and Drug Administration (FDA) as the safety level in edible fish.

Prior to 1971, PCB's were widely used in plastics, epoxy glue, lacquer resins, paints, varnishes, fire retardants, inks, carbonless copy paper and electrical equipment. In 1971, their use was voluntarily limited to closed electrical systems such as capacitors and transformers, for which no acceptable substitute has been found. All other use was prohibited by the U. S. Environmental Protection Agency in 1972.

In January, 1976, EPA adopted final regulations prohibiting the direct discharge of PCB's by companies which manufacture or use the chemical. The companies were given one year to comply. In May of this year EPA proposed regulations for the safe disposal and labeling of PCB's.

The federal Toxic Substances Control Act prohibits the manufacture of PCB's after January 1, 1979, and prohibits all PCB processing and distribution in commerce after June 1, 1979.

The only American manufacturer of the clear, viscous fluids is the Monsanto Chemical Corporation in Illinois, which makes 99% of the PCB's used in the United States. The rest are imported.



written and illustrated
by
Penni Sharp

Your September Environment

September is: hawks on the move...goldenrods blooming along roadsides and fields...katydids chorusing at night...warblers in their fall plumage...a harvest moon...the "doll's eyes" of baneberry gazing out from the woods...shorebirds heading south...leaves starting to turn...fox grapes ripening.

Fall Insects

Anyone who steps outdoors on a September night is bound to be greeted by the dominant evening sounds of this time of the year,...the buzzing and chirping of insects. Although insects do not have voices, the sounds that they produce carry over long distances. The sounds are usually the result of the rubbing together of legs or wings.

Of all of the creatures in the world, it is said that more than half of them are insects. One source states that 800,000 species have already been named, with between 7,000 to 10,000 new ones discovered each year. Some experts believe that from 1 to 10 million insect species are yet to be discovered.

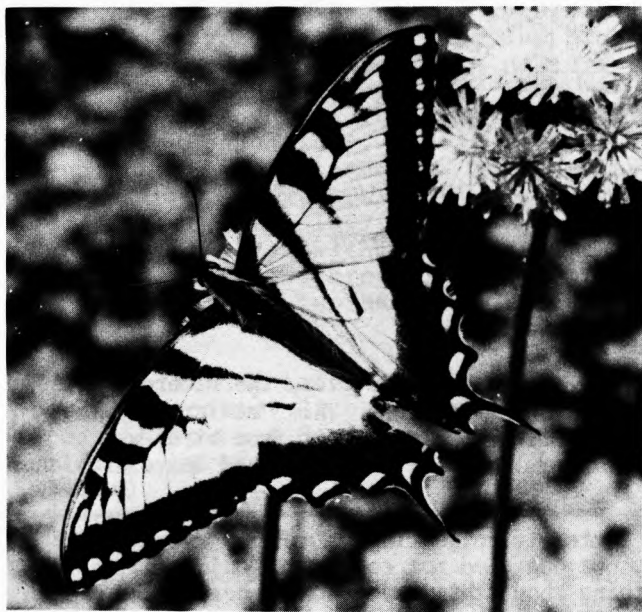
What is an insect?

An insect is an invertebrate animal that has six legs during its adult life. The body consists of three parts: head, thorax, and abdomen. Insects are equipped with two antennae and many also have wings. All insects go through changes in form known as metamorphoses during their lives. Most insects go through "complete metamorphosis" which comprises four stages--egg, larva, pupa and adult.

Throughout the world, there is an almost endless variety of insects doing a multitude of different things. Some build complicated dwellings, some make paper, some grow crops. There are carpenters, soldiers, drones and trappers. Can you add some functions to the list? Look for insects as you are outdoors; they are usually easy to find and observation of these fascinating creatures reveals much about their unusual habits and habitats.

Butterflies

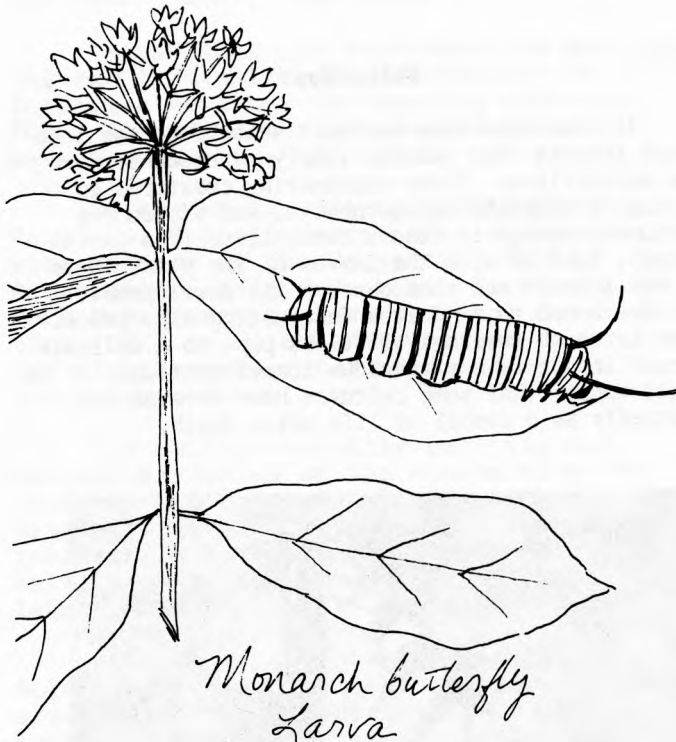
If you spend time outdoors searching, the loveliest insects that you are likely to encounter are the butterflies. These fascinating creatures go through a complete metamorphosis, and if you are fortunate enough to find a caterpillar (the larval stage), feed it with the leaves of the plant where it was located and then observe its development. You are bound to find it a fascinating experience. From larva to seemingly lifeless pupa to a delicate winged insect is a miraculous transformation. It is small wonder that some cultures have revered the butterfly as a symbol of life after death.



Butterflies are attracted to and most often observed near colorful flowers. They feed upon nectar, and like honeybees, aid in the transfer of pollen from flower to flower. By this action, they unwittingly help in maintaining their own food supply. Common butterflies seen in Connecticut include the swallowtails, mourning cloak, fritillaries and angewings.

Perhaps the most noticeable of all is the handsome Monarch. This orange and black butterfly is an interesting subject for study for a variety of reasons. During September and October, large clusters of Monarchs can be observed; occasionally, they literally cover a tree, creating a "butterfly tree." They are preparing for a long migration to the mountains of Central Mexico where they spend the winter.

An interesting relationship exists between the Monarch and the various species of milkweed plants. Many of the milkweeds are actually poisonous; all of them have a bitter taste. The larvae feed upon milkweeds and the bitterness of the plant is transferred to the larvae. A bird that feeds upon a monarch larva which has been feeding upon milkweed is not likely to return for seconds.



Another butterfly species, the Viceroy, closely resembles the Monarch. This "mimicry" by the Viceroy apparently protects it from birds which seem to mistake it for a Monarch and leave it alone.

Butterfly collecting is a hobby enjoyed by many, but one need not collect to enjoy and learn something about this exquisite member of the insect family.

Social Insects

Certain insects have evolved intricate community behavior patterns and are known as social insects. These include termites, bees, ants and some species of wasps. The social insects have highly

developed communications systems. For example, honeybees dance to inform other members of a hive where to locate a given food supply.

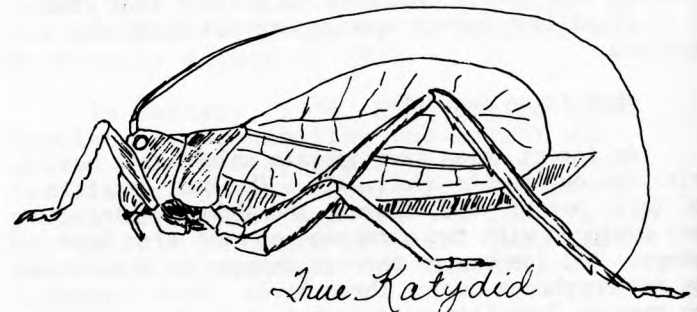
Perhaps the easiest social insect to observe is the ant. Ants can be found almost anywhere (occasionally where one doesn't wish to find them). They usually live in underground nests and feed on nectar, seeds and meat.

There are many kinds of ants and they do a variety of different things. Some ants keep aphids as "cows" and actually milk them; some grow mushroom gardens; many are fighters and during their battles, capture the young of other ants and use them as slaves.

Ants can be readily observed outdoors. Once you have gathered information regarding their feeding habits, you might wish to make your own ant farm. Here is one way to do it: Obtain a large screw top mason jar and replace the sealer with a small piece of window screen cut to fit or several layers of cheesecloth. Outdoors, locate an anthill and carefully fill the jar (about 3/4) full of earth from the anthill. Using a paper funnel, place the ants in the jar. A small piece of wet sponge can be added to supply the ants with water. A bit of sugar and some small seeds sprinkled on top of the earth will provide food. To ensure that the ants will form their tunnels against the sides of the jar, wrap the jar with black construction paper, which can be removed for viewing. By observing an "ant farm" one can learn much about these intriguing insects.

Katydid

The Katydid is one of the evening choristers and is a large green insect with exceedingly long antennae and wings that resemble a green leaf. It receives its name from the sound that it produces--often a continuous nocturnal calling during late summer and early fall. The noise is produced by the rubbing together of the front wings. Katydid are related to grasshoppers and inhabit trees and bushes where they feed chiefly upon leaves and



twigs. They lay their eggs during the fall and the young katydids hatch out in the spring. The young resemble the adults but lack the wings.

These are but a few examples of many, many different types of insects that exist in the world. Become an insect watcher, and discover some more members of this versatile family of animals.

Environmental Review Teams Revived

The Eastern Connecticut and King's Mark Environmental Review Teams will soon begin operation again thanks to \$30,000 grants received from the Connecticut Department of Environmental Protection.

The grants were authorized during the last legislative session to be given to the Eastern Connecticut and King's Mark Resource Conservation and Development Areas (RC&D) which developed and administered the technical assistance programs for the communities.

The Environmental Review Teams (ERT's) recently received national acclaim when the American Institute of Planners and the International City Management Association selected the Connecticut program from among 400 competitors as one of the top 12 HUD special grant programs in the country.

The ERT's are multidisciplinary teams of professionals in the fields of natural resources, engineering and planning that assist municipalities by objectively reviewing major land use proposals with respect to the natural resource base, the probable effects of site conditions on the project, and the potential impact of the project on the environment.

The ERT reports provide alternatives for avoiding or minimizing impacts and for utilizing site opportunities. Information developed by Environmental Review Team site reviews for specific land-use proposals are used by towns, developers, and local commissions and agencies in their decision-making processes in the preparation of state and/or federal grant applications for purchase of open-space lands, and in the development of school sites, industrial business developments and elderly housing.

The grant funds will be used by each RC&D to hire a full-time ERT coordinator and to meet the necessary administrative, clerical, drafting, and printing needs of each team.

The time of the professionals working on the team -- engineers, planners, geolo-

gists, soil scientists, foresters, biologists, conservationists -- is donated by various federal, state, and regional agencies which include the Soil Conservation Service, the Soil and Water Conservation Districts, the Cooperative Extension Service, the Connecticut Department of Environmental Protection, the Connecticut Health Department, and ten Regional Planning Agencies.

The ERT concept was initiated by the Eastern Connecticut RC&D in 1969 in response to problems presented by increasing numbers of residential subdivisions. Subdivisions in the 57 town area were being designed and approved without adequate consideration of the natural environment, resulting in problems with sewage disposal, water supply, and drainage, and overall loss of the natural qualities that contribute to the area's attractiveness.

The effectiveness of the ERT improved markedly in 1973 when the New England Regional Commission, through a demonstration grant to the Southeastern Connecticut Regional Planning Agency, provided for the first full-time coordinator. From July 1, 1974 to June, 1975 funding was received from the Eastern Connecticut Development Council.

In December, 1975, a special one year Innovative Projects Grant was received from the U.S. Department of Housing and Urban Development to fund the ERT in eastern Connecticut, to start up a new team to serve the 47 towns in the King's Mark Area in western Connecticut, and to develop a manual on the ERT concept to be distributed nationally by HUD. The HUD grant ended in February, 1977, and the state funding will begin within the next month or two. Interviews are being held presently to fill the two ERT coordinator positions.

For further information on the ERT programs, contact Richard Hyde, DEP, Natural Resources Center, State Office Building, Hartford, Conn. 06115, Tel. 566-3540.

Reminder:



SCORP

Questionnaire

Many of you who are members of Conservation Commissions, Land Trusts, and Environmental Groups have been sent a questionnaire concerning the State Comprehensive Outdoor Recreation Plan (SCORP). If you have not already completed and returned the form, kindly complete and return to the Planning and Coordination Unit, DEP, State Office Building, Room 118, Hartford, Conn. 06115.

Please contact us if you are in need of another form.

Annual Spill Report

DEP's Water Compliance Unit investigated more than 500 incidents involving the spill or discharge of oil, chemicals and other hazardous substances last fiscal year.

According to Commissioner Stanley J. Pac, the Water Compliance field staff received and investigated 554 spill reports between July 1, 1976 and June 30, 1977 -- ten more than the previous year. The Commissioner said "the increase of reported incidents is largely attributable to the fact that our citizens now understand the threat that hazardous substance spills pose to Connecticut's waters, and they are more willing to report such incidents."

The reported incidents resulted in the spillage or discharge of 290,176 gallons of hazardous substances, but less than half of that gallonage (105,117 gallons) reached Connecticut's waters.

Three of this year's major incidents were a 150,000 gallon gasoline spill in New Haven, a 6,700 gallon nonyl-benzene discharge off the coast of Norwalk, and a 20,000 gallon industrial discharge in Waterford.

According to Commissioner Pac, all three were cleaned up or dissipated and had minimal impact on the waters of the areas involved.

Wild Flower Conferences

The New England Wild Flower Society (NEWFS) is sponsoring two fall conferences on protection of native plants and critical habitats. The conferences are being organized for individuals representing private and public agencies, clubs and organizations who are interested in taking an activist role, examining existing legislation, or simply learning about threatened and endangered wildflowers in New England and how to get involved in their protection.

Below are listed the subjects, places, dates and programs of the two conferences.

Native Plants Different Approaches to Preservation

Tuesday, October 18 from 9:30-3:00 p.m. at Stamford Branch of University of Connecticut, Library Building, Function Room. Registration fee: \$3.00

Lectures: "Critical Habitats and Rare Native Plants in New England - The Society's Role" Leonie Foy, Plant Ecologist, Research Fellow for Society.

"Rare and Endangered Plants" Joseph Dowham, Botanist, Author of "Rare and Endangered Species of Connecticut."

"Preservation through Propagation" H. Lincoln Foster, Horticulturist, past President of the American Rock Garden Society.

"Designing with Nature" Pennie Logemann, Landscape Designer. Panel, discussion, question period with lecturers. Moderated by Marybeth Wheeler, Chairman of State Chapter of Society.

Protecting Critical Habitats & Rare Plant Species

Saturday, November 12 or Tuesday, November 15 from 10:00-3:00 p.m. at Nature Center Garden in the Woods, Hemenway Rd., Framingham, Mass. 01701. Registration/fee: \$6.00

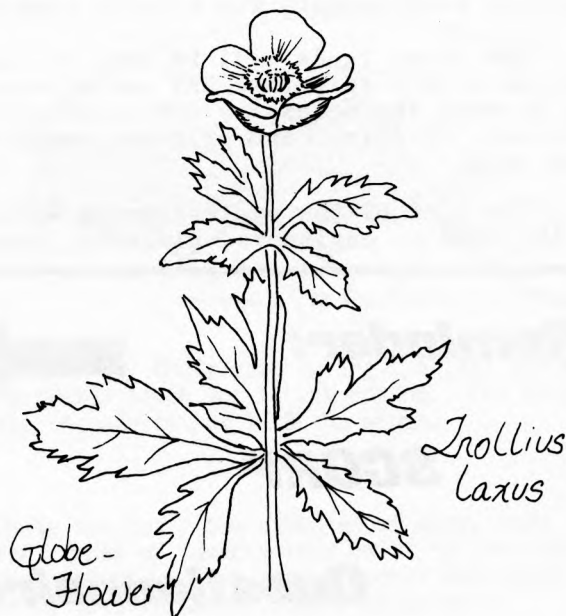
Lecturers: Leonie Foy, Plant Ecologist, Research Fellow for NEWFS. Jonathan Coddington and Katharine

Field, Botanists and members of the Endangered Species Committee of the New England Botanical Club.

Morning: An analysis of the impact which Federal and State endangered species laws have in fulfilling their intent to protect critical habitats and rare plant species in New England. Avenues for private participation by individuals will be discussed.

Afternoon: Slide presentation of selected endangered and rare species concentrating on Massachusetts. Explanation of the criteria for determining the status of rare native plants. (Coddington and Field are co-preparers of endangered plant species listed in Massachusetts for legislative protection). Panel, discussion, question period to follow.

Further details, brochure, information write to the New England Wildflower Society at Hemenway Rd., Framingham, Mass. 01701, or call (617) 877-6574.





Areawide Waste Treatment Management Planning Board

209 Court Street Middletown, Connecticut 06457
347-3700

By Mark Possidento, 208 Administrator

Industrial Site General Study

Industrial development in Connecticut is a phenomenon of growth which we all recognize as necessary to maintain the economic welfare of our state. New industries lead to new jobs which lead to a prosperous society. Yet, as the old saying goes, "everything has its place" and so does industrial development.

Under the Connecticut 208 Program special attention will be given to the relationship between the future use of land for industrial purposes and its potential impact on water quality. Existing industrial sites will not be analyzed under the 208 Program since their impact on water quality is already controlled by DEP through the NPDES Permit Program. This study of future industrial development sites is intended to provide guidance to both the industrial developer and the town planner in determining the best location for future development that will have the least impact on the water quality of neighboring streams and groundwater. Consequently, these sites would require the least amount of environmental controls by the developer.

To accomplish this task, a classification system will be developed to identify the general types of industries which specific types of land areas could support.

Some factors which will be included in this system are: the availability of streams which could receive treated industrial discharge without degrading existing water quality; the capability of existing sanitary sewers which might receive treated discharge; and the extent of constraints necessary to protect groundwater from subsurface discharge.

Maps of the state will be prepared showing watersheds, anticipated sewer service areas (to the year 2000), present and future industrial zones, and existing public water supplies, etc. These maps will aid town officials, industrial developers, environmentalists and interested citizens as they plan future industrial sites.

As a result of this study, recommendations will be made to each community in Connecticut for changes in their zoning to reflect the classification system and natural land constraints.

Early outputs of this study will be:

- A. Report: Industrial Zone Classification System (November 1977)

B. Maps (1" = 2000) for each region (February 1978) depicting the following information:

1. Class B waters
2. Drainage basins for Class AA waters
3. Watershed sub-areas
4. 1980 through 2000 sewer areas at five year increments
5. Present and proposed Industrial Zoned areas
6. Existing public water supply wells
7. Major aquifer areas

Industrial Sludge Study

An auxiliary study to be carried out for Connecticut's three most heavily industrialized areas - the Greater Bridgeport, Central Naugatuck Valley, and Capitol Regions - concerns the deposition of sludges generated by industries. Industrial sludge, which is either a by-product of the actual industrial process or the residual from industrial air or water pollution control facilities, usually contains high concentrations of pollutants that, if washed into a nearby stream, could cause a health hazard or, if leached into our groundwater, could contaminate our water supplies. How this semiliquid material is disposed of is therefore of particular concern.

Inventory

The special interest over the deposition of industrial sludges stems partly from the fact that little information is available on the disposal practices employed by industries. For this reason, the first phase of this study will be to inventory all generators of industrial sludge within the three region area. Preliminary research has indicated that as many as 1500 industries in the study areas produce a sludge that could be hazardous if not disposed of properly.

Assessment

The second phase of the study will be to review each industry's disposal practices to determine if water quality is being affected by the sludge. On-site inspections along with remote-sensing techniques such as color and thermal infrared photography will be utilized to complete this task.

Recommendations

A third phase of the study will be to recommend alternate disposal methods for those sites where a water quality problem is discovered. Also,

Cont. on next page

it will review and develop a model management program that will preclude against further industrial sludge-related pollution problems.

A preliminary output of this study will be:

- A. Report (with maps 1" = 2000'): Inventory of Industrial Disposal Sites (May 1978)

208 Workplan Summary

The industrial studies discussed above is just one of many areas of investigation to be conducted under the Connecticut 208 Program. A summary document is now available which will provide interested citizens with a concise outline of all studies to be undertaken by the 208 Program in Connecticut. If you would like to receive a copy of the 208 Workplan Summary please contact the 208 Central Office or the Regional Planning Agency covering your area.

Autumn Adventure

Boating on Long Island Sound

With the summer over, the peak of the boating season is past, but for many boaters the ideal time for a pleasant outing on Connecticut's waters is a clear, sunny autumn day.

Fortunately, Connecticut is blessed with water -- lots of it -- over 500 lakes and ponds, three major river systems, miles of smaller streams and more than 250 miles of shoreline fronting on Long Island Sound. The Connecticut DEP maintains more than 100 access points throughout the state where boaters and fishermen can launch trailable boats. Thirteen of these ramps are located along the shores of the Sound.

The 1,300 square mile surface of the Sound is one of the busiest boating areas in the nation. According to U.S. Coast Guard estimates, there are close to a quarter of a million boats around the periphery of the Sound, and on a peak weekend 10,000 to 12,000 boats are underway.

For boat owners whose primary interest is fishing, the Sound is a fruitful provider, and a great source of sport, especially in the fall. At this time of year bluefish is probably the most sought after species with fishermen heading out to The Race or Plum Gut for the famed fighting blues. For the large boat owner, the ocean off Montauk and Block Island in the fall offers cod, and depending on the water temperature in a given year, tuna, shark, and occasionally bill fish.

However, salt water fishing is not limited to boat owners. A fleet of charter boats and party boats will take fishermen out almost year round for a fee. The average charter boat charges \$175-200 a day for a party of 6. When the blues are in, half-day charters can be arranged. Party boats that can accommodate many fishermen charge about \$20 a head and can provide equipment and bait. These craft are equipped with sophisticated electronic gear to help locate schools of fish and is an unusual day when a fishing party comes home skunked. All charter boat skippers are Coast Guard licensed, and the larger party boats are Coast Guard inspected assuring safety.

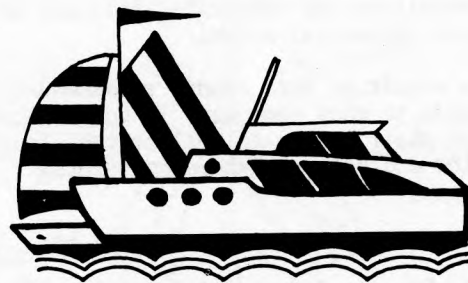
The cruising sailor could spend weeks exploring the many ports along the Sound's shores. Many quaint and historic sights are there for those who

would seek them out, and the fall is an excellent time of year to try. Exploring coves and bays, swimming early in the season, and beach combing have their fascination for some. Collecting shells and driftwood, clamming, crabbing and watching the gulls, terns, swans and other waterfowl can make one relax and forget his troubles. A cruise up the Connecticut River with the fall foliage ablaze is a sight one will long remember.

A cruise on the Thames takes one past the Electric Boat Shipyard where many ships of the silent fleet are built as well as the U.S.C.G. Academy. Connecticut's Marine heritage can be recalled by a visit to the Mystic Seaport on the Mystic River, and close by is the Mystic Aquarium where all sorts of marine life can be observed.

There's a lot of competitive sailboat racing on Long Island Sound which goes on into the fall and even the winter. The Frostbiters sail their boats even in weather which leaves icicles on their beards. With the tremendous growth of class and handicap racing, it is not unusual to see fleets of 100 racing on some weekends. This keen competition has sharpened the skills of many skippers to produce winners in the Bermuda, Newport and Off Sound-ing races and has provided many skippers for America's Cup defenders. This month the America's Cup races will be held off Newport, R.I. to determine who will win the "Auld Mug" as the cup is called.

Whether you fish, cruise or sail, boating on the Sound in the fall can provide many days of enjoyable recreation. Just remember, safe boating is no accident--be sure your craft is equipped for safety.



Summer Workshops



East Lyme Workshop

Approximately 500 citizens discussed a broad range of major coastal issues and commented on preliminary recommendations for a comprehensive coastal management plan at public workshops held throughout the state this summer by the Coastal Area Management (CAM) Program.

One important result of the nine workshops, held in both shore and inland communities, is that CAM now has a better idea of how the public views the program.

According to Arthur Rocque, CAM's Assistant Director, "the commentary has been helpful in changing our perspective on some of the recommendations and in evaluating how they are perceived.

"For example," he said, "many people apparently misunderstood some of the recommendations, and we now realize that some of them need further refinement, especially those dealing with the relationship between state, regional and local government."

The workshops also fulfilled their original purpose of involving the public directly in the planning process, according to Rocque. The size of the turnout was encouraging, and the range of interests represented was broad, he said, including state legislators, the League of Women Voters, coastal regional planning agencies, chambers of commerce, marina operators, and environmentalists.

Rocque said the questions and comments at each workshop covered a diverse field of issues, but certain themes recurred at the various sessions.

"Some of the concerns most often expressed," he said, "were -- support for encouraging only water-dependent development along the coast, the role of the towns in the actual management of the coast, increasing beach access, maintaining private

property rights, lack of enforcement of existing regulatory programs, and preserving our remaining natural resources."

Questionnaire

A specially designed questionnaire was distributed with the Citizens' Handbook at the workshops to assist the CAM staff in assessing the views of the public on coastal management issues. Both the questionnaire and the Handbook are available at the CAM office.

The results of the questionnaire will be compiled in late September. The findings from the questionnaire, along with the comments recorded at the summer workshops, and detailed position statements presented independently throughout the year by various interest groups will all be incorporated into a final coastal management plan which will be submitted for approval to the 1978 session of the General Assembly.

Fall Activities

During the fall, CAM staff members will be meeting with local officials, including various board and commission members, to discuss specific recommendations and legislative proposals.

The staff will also be holding public hearings on the recommendations in November and December, prior to the legislative session. In addition, the League of Women Voters is presently in the process of setting up additional meetings with key citizens in coastal towns. The CAM Program is also co-sponsoring New Haven's Seacoast Celebration on Saturday, September 17 at Gateway Landing on the waterfront.

"The CAM Program has been actively soliciting public participation since its inception -- and we're not about to stop now," said Mary Ann Dickinson, CAM's Public Participation Coordinator.

"As always, the staff is available at any time to discuss the program, present slides or show films on coastal issues to the public. Your comments and suggestions are always welcome," she said.

For more information, or copies of the Citizens' Handbook contact:

Coastal Area Management Program
71 Capitol Avenue
Hartford, Connecticut 06115
566-7404

Connecticut River Salmon Wrap-up

The efforts of the New England states and the federal government to restore Atlantic salmon to the Connecticut River system paid off this summer with the verified return of seven adult salmon.

The first Atlantic salmon in 100 years to be captured in the basin on rod and reel was an 8-pound, 29-inch fish taken May 4, 1977, below Leesville Dam on the Salmon River, a tributary in Connecticut, by Darek Ostrowski, a 15-year-old newsboy from New Britain, Connecticut. The fish is believed to have been one of a group of 40,000 smolts reared at the Pittsford National Fish Hatchery and released in the Salmon River in 1975.

The second salmon (7 pounds and 24 inches) was taken May 29, 1977, in the Holyoke Dam fishlift by a Massachusetts fish and wildlife technician. It was transferred alive to the Berkshire Trout Hatchery.

The third salmon (7-1/2 pounds and 28 inches) was taken in a commercial gillnet set overnight for shad in the Connecticut River at Hadlyme, Connecticut, June 3, 1977.

On June 15, 1977, a blueback herring snag-fisherman (Jerry Kusina, Portland, Connecticut) foul-hooked and landed a fourth salmon (8 pounds and 28 inches) below Leesville Dam on the Salmon River, Connecticut. This fish was transferred alive to the Berkshire Trout Hatchery. The Kusina salmon bore a tag that revealed its origin as one of the Pittsford Hatchery pre-smolts (two years and 6.5 inches) released March 19, 1975, into the Salmon River.

A fifth salmon (7-1/2 pounds and 28 inches) was caught June 22, 1977, below Leesville Dam, Salmon River, Connecticut, by a fly fisherman (Robert Dwyer, Jr., of Green, Rhode Island) fishing for Atlantic salmon. This fish was transferred alive to the Berkshire Trout Hatchery.

The sixth salmon was found floating dead in the Connecticut River about 4 miles above the Holyoke Dam fishlift, on June 27, 1977. This fish (27-1/2 inches) was partially decomposed, but proved on autopsy by state and federal fisheries technicians to have been an adult female.

The seventh salmon (7-1/2 pounds and 28 inches) was captured on July 2, 1977, at the Holyoke Dam fishlift. It was transferred alive to the Berkshire Trout Hatchery.

At present, the Berkshire Trout Hatchery is host to four live adult Connecticut River Atlantic salmon. They are being well cared for, including regular disinfection treatments to preclude the onset of fungal or bacterial diseases. Unfortunately, the sexes of these fish are not yet known. Meanwhile, it is hoped that a few more adult salmon will be captured during September, when additional returning fish are tentatively expected.



A Hunter's Advice to His Son

The opening of the hunting season is only a few weeks away. Below is a timely bit of advice about gun safety from a father to his son. The poem was written many years ago by an English hunter when he gave his son his first gun.

If a sportsman true you'd be,
Listen carefully to me;

Never, never let your gun
Pointed be at anyone;
That it may unloaded be
Matters not the least to me.

When a hedge or fence you cross,
Though of time it cause a loss,
From your gun the cartridge take
For the greater safety sake.

If 'twixt you and neighboring gun
Bird may fly or beast may run,
Let this maxim e'er be thine:
"Follow not across the line."

Stops and beaters, oft unseen,
Lurk behind some leafy screen;
Calm and steady always be:
"Never shoot where you can't see."

Keep your place and silent be,
Game can hear and game can see;
Don't be greedy, better spared
Is a pheasant, than one shared.

You may kill, or you may miss,
But at all times think of this--
"All the pheasants ever bred
Won't repay for one man dead."

Permits Issued

July/August, 1977

Air Compliance

July 6
Combustion Engineering Inc.
Permit to construct a boiler in the Town of Windsor.

July 6
Philips Medical Systems
Permit to construct two boilers in the Town of Shelton.

July 6
Pitney Bowes, Inc.
Permit to construct two boilers in the Town of Stamford.

July 12
Macrange Corp.
Permit to operate an incinerator in the City of Orange.

July 18
Mobil Oil Corp.
Permit to construct and operate a gasoline storage tank in the City of New Haven.

July 21
United Technologies Corp.
Permit to construct two tanks in the Town of Stratford.

July 25
The Hospital of St. Raphael
Permit to operate an incinerator in the City of New Haven.

July 26
Mobil Oil Corp.
Permit to operate a dryer and plastic film orientation line in the Town of Stratford.

July 26
D'Addario Services Inc.
Permit to construct and operate a concrete batcher and to construct and operate three cement silos in the City of Bridgeport.

July 26
Hummel Bros., Inc.
Permit to operate a boiler in the City of New Haven.

July 28
Combustion Equipment Assoc.
Permit to operate two silos in the City of Waterbury.

July 28
Deitsch Plastic Co., Inc.
Permit to construct a coating machine in the Town of West Haven.

July 28
Beiersdorf, Inc.
Permit to operate two boilers in the Town of Norwalk.

Water Compliance

August 3
Sikorsky Aircraft
Permit, with conditions to discharge non-contact cooling waters and metal finishing wastewaters to the Housatonic River Watershed in the Town of Stratford.

August 3
Connecticut Manufacturing Co. Inc.
Permit, with conditions, to discharge treated metal cleaning and tumbling wastewaters to the Naugatuck River Watershed in the City of Waterbury.

August 3
American Chemical & Refining Co. Inc.
Permit, with conditions, to discharge treated metal recovery refining wastewaters to Naugatuck River Watershed in the City of Waterbury.

August 3
Whitney Chain
Permit, with conditions, to discharge treated metal finishing wastewaters to the Connecticut River Watershed in the City of Hartford.

August 4
New Haven Water Co.
Permit, with conditions, to discharge 25,000 gallons per day of non-contact cooling water to the Silver Brook Watershed in the Town of West Haven.

August 4
Dan Beard Inc.
Permit, with conditions, to conduct dredging operations in the Housatonic River at Shelton.

August 4
Sand Lane Village Association
Permit, with conditions, to discharge sanitary sewage to the Still River Watershed in the Town of Brookfield.

Water Resources

August 5
George F. Pavarini
Permit to install and maintain a dock, a ramp, a float, and fourteen wood piles in the Town of Greenwich.

August 11
City of Bridgeport
Development Administration
Permit to construct and maintain a fixed pile and timber pier and abutting finger floats and floating fishing piers on the Pequonnock River in Bridgeport.

August 22
T.C. Johnson Yacht Sales
Permit to install and maintain one three pile dolphin, two mooring piles and one 28'x4' pier in the Connecticut River at Deep River.

Trailside Botanizing

by G. Winston Carter

SWEET FERN
(Comptonia peregrina)

Many of our wild plants can be readily identified because they have something unique about them when we touch, taste or smell some part of the plant. This greatly simplifies the problem of identification for the beginner who wants to know something about plants and doesn't know how to start.

Sweet Fern is an example of the above. Its leaves and stems when crushed produce a very distinct odor. It is rather a pleasing sensation for some but to others it is objectionable. Those who enjoy its fragrance have at times crushed and dried its leaves and used them for stuffing pillows. The taste of the dried leaves also must have had some appeal because they were used during the Revolutionary War days as a source of tea.

This plant is commonly found growing on dry sandy soil. Some farmers consider it an index of poor soil because it will grow where the usual farm crops will not. It is not a true fern but rather a low-growing shrub with woody stems and branches. The only reason it is referred to as a fern is because of its leaves which have rounded lobes like some ferns.

Sweet Fern is a good anchor and it is considered good shelter for small game. Authorities seem to disagree on its value as food for wild life. Some authors indicate that it is eaten by such game animals as the ruffed grouse and white tailed deer.



Pam Carter

DEP citizens' bulletin

State of Connecticut
Department of Environmental Protection
State Office Building
Hartford, Connecticut 06115

Commissioner: Stanley J. Pac
Director, Info & Ed: Greg Sharp
Layout: Rosemary Guthrod
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Phone: 566-5524

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